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## NOTICE OF ALLOWANCE AND FEE(S) DUE

7590

David L. Fehrman

555 W. 5th Street

Los Angeles, CA 90013

35th Floor

09/03/2009

Morrison & Foerster LLP

**EXAMINER** 

FAULK, DEVONA E

ART UNIT

PAPER NUMBER

2614

DATE MAILED: 09/03/2009

1	APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
	10/617,186	07/09/2003	Hideki Hagiwara	393032038900	3003

TITLE OF INVENTION: DIGITAL COMPRESSOR FOR MULTI-CHANNEL AUDIO SYSTEM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	12/03/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. <u>PROSECUTION ON THE MERITS IS CLOSED</u>. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

#### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current **SMALL ENTITY status:** 

A. If the status is the same, pay the TOTAL FEE(S) DUE shown

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If the SMALL ENTITY is shown as NO:

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B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

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David L. Fehrr Morrison & Foe 35th Floor	rster LLP	72009	I S ac tr	Cei hereby certify that the tates Postal Service of Idressed to the Mai ansmitted to the USF	r <b>tificate</b> nis Fee(s with suf l Stop TO (57	of Mailing or Transm s) Transmittal is being ficient postage for first ISSUE FEE address a 1) 273-2885, on the dat	nission deposited with the United class mail in an envelope bove, or being facsimile te indicated below.
555 W. 5th Street Los Angeles, CA							(Depositor's name)
<i>C</i> ,			_				(Signature)
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APPLICATION NO.	FILING DATE		FIRST NAMED INVENTO	OR	ATTO:	RNEY DOCKET NO.	CONFIRMATION NO.
10/617,186	07/09/2003		Hideki Hagiwara		3	393032038900	3003
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APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DU		E FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0		\$1810	12/03/2009
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FAULK, D		2614	381-104000				
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Please check the appropr	iate assignee category or	categories (will not be p	rinted on the patent):	┛Individual ┛C	orporati	on or other private grou	p entity Government
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	s SMALL ENTITY state	is. See 37 CFR 1.27.				FITY status. See 37 CFI	
interest as shown by the	records of the United Sta	tes Patent and Trademark	c Office.	и ше аррисапт; а гед	istered a	morney or agent; or the	assignee or other party in
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10/617,186	07/09/2003	Hideki Hagiwara	393032038900	3003		
75	7590 09/03/2009			EXAMINER		
David L. Fehrma	n	FAULK, DEVONA E				
Morrison & Foerster LLP			ART UNIT	PAPER NUMBER		
35th Floor 555 W. 5th Street Los Angeles, CA 9	00013		2614 DATE MAILED: 09/03/200	9		

# Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 817 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 817 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

	Application No.	Applicant(s)	
	10/617,186	HAGIWARA, HIDEKI	
Notice of Allowability	Examiner	Art Unit	
	DEVONA E. FAULK	2614	
The MAILING DATE of this communication appeal claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT R of the Office or upon petition by the applicant. See 37 CFR 1.313 1.   This communication is responsive to 6/2/09.	(OR REMAINS) CLOSED in to or other appropriate communities. This application is su	this application. If not included nication will be mailed in due cou	rse. <b>THIS</b>
2. X The allowed claim(s) is/are <u>1,3-7,9-11,13-15 and 17-22</u> .			
3.  Acknowledgment is made of a claim for foreign priority una   a)  All b)	e been received. e been received in Application ocuments have been received of this communication to file and ENT of this application.  Initted. Note the attached EXAMER reason(s) why the oath or constituted of the submitted. In the son's Patent Drawing Review of the submitted of the submitted of the submitted of the son's Patent Drawing Review of the submitted	No in this national stage application a reply complying with the require MINER'S AMENDMENT or NOTI declaration is deficient.  ( PTO-948) attached at the Office action of a drawings in the front (not the back 1.121(d).  RIAL must be submitted. Note	ements ICE OF
Attachment(s)  1. ☑ Notice of References Cited (PTO-892)  2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date  4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material	6. ☐ Interview Sur Paper No./M 7. ☑ Examiner's A	Aail Date Imendment/Comment Statement of Reasons for Allowar	ıce

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### **DETAILED ACTION**

# Response to Remarks

1. The applicant amended the claims to overcome the 103(a) rejection. The applicant agreed to an examiner's amendment to place the claims in allowable form.

2. Claims 2,8,12,16 are cancelled.

### **EXAMINER'S AMENDMENT**

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David T. Yang (Reg. 44,415) on 8/28/09.

The claims are to be amended as follows:

Claim 1 should be amended to recite the following:

Claim 1 (currently amended): A level adjustment method executed in applicable to an audio processing apparatus having a plurality of amplifiers corresponding to three or more of channels of audio signals, which constitute a get of surround signals in a surround system, for inputting the audio signals and amplifying the input audio signals, the level adjustment method comprising:

a group type select process of selecting a grouping type among a plurality of

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grouping types, according to operation by a user;

a group arrangement process of arranging the plurality of the channels into one or more groups according to the selected grouping type, such that the groupings of the channels are different as between any given two of the grouping types and that. at all times, each of the channels of audio signals belongs to only one of the groups;

a detection process of detecting, for each group, a maximal value of the signal levels of the input audio signals of channels belonging to the group; and an adjustment process of determining, for each group, a common amplification gain according to the detected maximum value and supplying the determined common amplification gain to the amplifiers of the channels belonging to the group such as to attenuate the output levels of the input audio signals if the maximum value exceeds a threshold level .specified by the user wherein said three or more channels of audio signals constitute a set of surround signals in an ordinary surround system and are grouped together into one or more groups during said group arrangement process, wherein each of the channels of audio signals belongs to only one of the groups and wherein, when the maximum signal level is below the threshold level, the adjustment process is performed to maintain the common amplification gain, when the maximum signal level exceeds the threshold level, the adjustment process is performed to attenuate the level of the input audio signals.

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Claim 11 is to be amended to recite the following:

Claim 11 (currently amended): A level adjustment method applicable to executed in an audio processing apparatus having a plurality of amplifiers corresponding to three or more of channels of , audio signals, which constitute a set of surround signals in a surround system, for inputting the audio signals and amplifying the input audio signals, the level adjustment method comprising:

a group type select process of selecting a grouping type among a plurality of grouping types, according to operation by a user;

a group arrangement process of arranging the plurality of the channels into one or more groups according to the selected group type, such that the groupings of the channels are different as between any given two of the grouping types and that, at all times, each of the channels of audio signals belongs to only one of the groups.;

a detection process of detecting, for each group, a maximal value of the signal levels of the input audio signals of the channels belonging to the group; and an adjustment process of determining, for each group, a common amplification gain according to the detected maximum value and supplying the determined common amplification gain to the amplifiers of the channels belonging to the group so as to attenuate the level of the output audio signals if the maximum value exceeds a threshold levels specified by the user,

wherein said three or more channels of audio signals constitute a set of surround signals in an ordinary surround system and are grouped together into one or

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more groups during said group arrangement process, wherein each of the channels of audio signals belongs to only one of the groups;

wherein, when the maximum signal level is below the threshold level, the adjustment process is performed to maintain the common amplification gain, when the maximum signal level

exceeds the threshold level, the adjustment process is performed to attenuate the level of the input audio signals, and

wherein the common amplification gain is determined such that the excess of the maximum value is suppressed in accordance with a ratio specified by the user.

Claim 15 is to be amended to recite the following:

Claim 15 (currently amended): An audio processing apparatus comprising: a plurality of amplifiers corresponding to three or more of channels of audio signals, which constitute a set of surround signals in a surround system, for amplifying signal levels of the respective channels;

a group type select section that, in response to user operation, selects a desired grouping type among a plurality of grouping types;

a group arrangement section for arranging the plurality of the channels into one or more group according to the selected grouping type, such that the groupings of the channels are different as between any given two of the grouping types and that, at all times, each of the channels of audio signals belongs to only one of the groups;

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a detection section that detects, for each group, a maximal value of the signal levels of the input audio signals of the channels belonging to the group; and an adjustment section that determines, for each group, a common amplification gain according to the detected maximum value and supplying the determined common amplification gain to the amplifiers of the channels belonging to the group so as to attenuate the output levels of the input audio signals if the maximum value exceeds a threshold level specified by the user, wherein said three or more channels of audio signals constitute a set of surround signals in an ordinary surround system and are grouped together into one or more groups during said group arrangement process, wherein each of the channels of audio signals belongs to only one of the groups:

and

wherein, when the maximum signal level is below the threshold level, the adjustment process is performed to maintain the common amplification gain, when the maximum signal level

exceeds the threshold level, the adjustment process is performed to attenuate the level of the input audio signals.

Claim 17 is to be amended to recite the following:

Claim 17 (currently amended): A graphic user interface installed in an audio processing apparatus having a plurality of amplifiers corresponding to three or

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more of channels of input audio signals, which constitute a set of surround signals in a surround system, for amplifying the input audio signals, the graphic user interface being designed for assisting the audio processing apparatus in performing a level adjustment method comprising a group arrangement process of arranging the plurality of the channels into one or more group, and a group control process of controlling each group such as to attenuate the output levels of the input audio signals belonging to the same group as a maximal value of the signal levels of the input audio signals belonging to the group increases, wherein the graphic user interface provides:

a visual symbol prompting the user to select a desired grouping type among a plurality of grouping types, the grouping of the channels at the group arrangement process is controlled according to the selected grouping type, such that the groupings of the channels are different as between any given two of the grouping types; and

another visual symbol prompting the user to input parameters, including a threshold level, effective to determine how the output audio signals is attenuated according to the maximal signal level during the group control process wherein said three or more channels of audio signals constitute a set of surround signals in an ordinary surround system,

wherein, at all times, the group arranged by the group arrangement process are different between any two of the grouping types and each of the channels of audio signals belong to only of the groups, wherein each of the channels of audio signals belongs to only one of the groups

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, and wherein, when the maximum signal level is below the threshold level, the group control process is performed to maintain the common amplification gain, when the maximum signal level exceeds the threshold level, the adjustment process is performed to attenuate the level of the input audio signals.

Claim 19 is to be amended to recite the following:

Claim 19 (currently amended): An audio processing apparatus comprising: a plurality of amplifiers corresponding to three or more of channels of input audio signals: which constitute a set of surround signals in a surround system, for amplifying the input audio signals;

a group type select section of selecting a grouping type among a plurality of grouping types, according to operation by a user

a group arrangement section that arranges the plurality of the channels into two or more groups according to the selected grouping type, such that the groupings of the channels are different as between any given two of the grouping types and that, at all times, each of the channels of audio signals belongs to only one of the groups;

a detection section that detects, for each group, a maximal value of the signal levels of the input audio signals of the channels belonging to the same group; and

an adjustment section that determines, for each group, a common amplification gain according to the detected maximum value and supplying the determined common amplification gain to the amplifiers of the channels belonging to the

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group so as to attenuate the level of the output audio signals if the maximum value exceeds a threshold level specified by the user,

wherein said three or more channels of audio signals constitute a set of surround signals in an ordinary surround system and are grouped together into one or more groups during said group arrangement process, wherein each of the channels of audio signals belongs to only one of the groups,

wherein, when the maximum signal level is below the threshold level, the adjustment process is performed to maintain the common amplification gain, when the maximum signal level

exceeds the threshold level, the adjustment process is performed to attenuate the level of the input audio signals, and

wherein the common amplification gain is determined such that the excess of the maximum value is suppressed in accordance with a ratio specified by the user.

Claims 1,3-7,9-11,13-15,17-22 are allowed. The following is an examiner's statement of reasons for allowance: Regarding claims 1,11,15, 17,19 prior art Bizjak (US 7,212,640) discloses a level adjustment method applicable to an audio processing apparatus, the level adjustment method comprising:

A group type select process of selecting a grouping type among a plurality of grouping types, according to operation by a user (column 30, line 55-65; Figures 8C-8G);

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A group arrangement process of arranging the plurality of the channels into one or more group according to the selected grouping type (column 30, line 55column 31, line 12);

A detection process of detecting, for each group, a maximal value of the signal levels of the input audio signals or channels belonging to the group (column 31, lines 25-42); and

An adjustment process of determining, for each group, a common amplification gain according to the detected maximum value and supplying the determined common amplification gain to the amplifiers of the channels belonging to the group such as to attenuate the output levels of the input audio signals if the maximum value exceeds a threshold specified by the user (column 32, lines 25-35; column 33, line 64-column 34, line 25).

Bizjak teaches of inputs having associated input level adjusters (column 34, lines 47-51).

Prior art Suzuki (US 5,054,077).

discloses groupings of channels that are different as between any given two of the grouping types (See Figure 4; column 3, lines 41-60).

Regarding claims 1,11,15,17,19 the prior art or combination thereof fails to disclose or make obvious wherein, wherein said three or more channels of audio signals constitute a set of surround signals in an ordinary surround system and

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are grouped together into one or more groups during said group arrangement process, wherein each of the channels of audio signals belongs to only one of the groups.

Claims 3-7,9,10,13,14,18,20-22 are allowed due to dependency on claims 1,11,15,17 and 19.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEVONA E. FAULK whose telephone number is (571)272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devona E. Faulk/ Primary Examiner, Art Unit 2614